

Name:

Solutions / Answers

1. Multiply $5(x-4) = 5x-20$

2. Multiply $5x(x-4) = 5x^2-20x$

3. Multiply $(x+2)(x+5) = x^2+7x+10$

4. Multiply $(x-2)(x+5) = x^2+3x-10$

5. Multiply $(x+5)(x+5) = x^2+10x+25$

6. Multiply $(2x+5)(x+3) = 2x^2+11x+15$

7. Multiply $(2x-5)(4x+3) = 8x^2+6x-20x-15$
 $= 8x^2-14x-15$

8. Factor $6x - 42 = 6(x - 7)$

9. Factor $7x^2 - 35x = 7x(x - 5)$

10. Factor $x^2 + 8x + 12 = (x + 2)(x + 6)$

11. Factor $x^2 - 4x - 12 = (x - 6)(x + 2)$

12. Factor $x^2 + 12x + 36 = (x + 6)(x + 6) = (x + 6)^2$

13. Factor $5x^2 - 6x - 8 = (5x + 4)(x - 2)$

14. Factor $6x^2 - x - 15 = (2x + 3)(3x - 5)$

15. Solve $4(x+7)=0$

$$x+7=0$$

$$x=-7$$

$$\{-7\}$$

16. Solve $6x(x-11)=0$

$$6x=0$$

$$x=0$$

$$x-11=0$$

$$x=11$$

$$\{0, 11\}$$

17. Solve $(x-7)(x+9)=0$

$$x-7=0$$

$$x=7$$

$$x+9=0$$

$$x=-9$$

$$\{7, -9\}$$

18. Solve $(x+9)(x-9)=0$

$$x+9=0$$

$$x=-9$$

$$x-9=0$$

$$x=9$$

$$\{-9, 9\}$$

19. Solve $(x+6)(3x-7)=0$

$$x+6=0$$

$$x=-6$$

$$3x-7=0$$

$$3x=7$$

$$x=\frac{7}{3}$$

$$\{-6, \frac{7}{3}\}$$

20. Solve $(3x+2)(4x-5)=0$

$$3x+2=0$$

$$3x=-2$$

$$x=-\frac{2}{3}$$

$$4x-5=0$$

$$4x=5$$

$$x=\frac{5}{4}$$

$$\{-\frac{2}{3}, \frac{5}{4}\}$$

21. Solve $x^2 - 7x = 0$

$$x(x-7) = 0$$

$$x = 0 \quad x - 7 = 0$$

$$x = 7$$

$$\{0, 7\}$$

22. Solve $x^2 - 9x + 14 = 0$

$$= (x-2)(x-7) = 0$$

$$x - 2 = 0 \quad x - 7 = 0$$

$$x = 2 \quad x = 7$$

$$\{2, 7\}$$

23. Solve $x^2 - 14x + 49 = 0$

$$(x-7)(x-7) = 0$$

$$(x-7)^2 = 0$$

$$x - 7 = 0$$

$$x = 7$$

$$\{7\}$$

24. Solve $2x^2 + 13x + 20 = 0$

$$(2x + 5)(x + 4) = 0$$

$$2x + 5 = 0$$

$$2x = -5$$

$$x = -\frac{5}{2}$$

$$x + 4 = 0$$

$$x = -4$$

$$\{-\frac{5}{2}, -4\}$$

25. Solve $8x^2 - 2x - 3 = 0$

$$(2x + 1)(4x - 3) = 0$$

$$2x + 1 = 0 \quad 4x - 3 = 0$$

$$2x = -1$$

$$x = -\frac{1}{2}$$

$$4x = 3$$

$$x = \frac{3}{4}$$

$$\{-\frac{1}{2}, \frac{3}{4}\}$$